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GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
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Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted
a patent (Rule 4.17(ii)) for the following designations AE,
AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG,
KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,
MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU,
SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG,
UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European
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GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR),
OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
ML, MR, NE, SN, TD, TG)

— as to the applicant's entitlement to claim the priority of the
earlier application (Rule 4.17(iii)) for the following desig-
nations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY,
BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC,
EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN,
IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV,
MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN,
TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO
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TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE,
DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT,
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— of inventorship (Rule 4.17(iv)) for US only

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2 September 2004

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: METHOD OF IMPROVING ABSORPTION OF VITAMIN E BY A PET ANIMAL

(57) Abstract: A method of providing a pet with a benefit relating to effective assimilation of a lipid is described wherein the pet is administered, as a part of, or in addition to its regular diet, an edible composition that contains an ingredient that maintains, promotes or enhances the capacity of the pet to digest lipid efficiently. The invention extends to compositions for use in promoting lipid assimilation in pets, particularly senior or elderly pets. The compositions include pancreatic, liver and intestinal mucosa function-promoters. In embodiments, the liver function-promoter may be selected from taurine, emulsifiers, vitamins, minerals, glutathione and glutathione promoters.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/03523

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A23K1/165 A23K1/16 A23K1/18

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A23K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, FSTA, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01 62280 A (MARGOLIN ALEX ; SHENOY BHAMI (US); ALTUS BIOLOG INC (US)) 30 August 2001 (2001-08-30) cited in the application page 1, paragraph 4 page 10, paragraphs 2-4 claims 1,10,24,38,42	1-4,7, 14-20, 22, 24-30,33
Y		5,6, 8-13,21, 31,32,34
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

18 December 2003

Date of mailing of the international search report

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/03523

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	NICHOLSON, A., WATSON, A.D.J., AND MERCER, J.R.: "Fat malassimilation in cats" AUSTRALIAN VETERINARY JOURNAL, vol. 66, no. 4, 1989, pages 110-113, XP001112921 AUSTRALIAN VETERINARY ASSOCIATION, BRUNSWICK, AU ISSN: 0005-0423 cited in the application page 110, column 1, paragraph 1 -column 2, paragraph 4	1-3,8, 14, 17-20, 22,24, 26-28,33
X	SUZUKI, A. ET AL.: "Effect of bacterial or porcine lipase with low or high fat diets on nutrient absorption in pancreatic insufficient dogs" GASTROENTEROLOGY, vol. 116, 1999, pages 431-437, XP001053436 W.B.SAUNDERS COMPANY, PHILADELPHIA., US ISSN: 0016-5085 see whole document page 431, column 1, paragraph 1 -page 432, column 2, paragraph 3	1-3,8, 14, 17-20, 22,24, 26-28,33
Y	CANTAFORA A ET AL: "DIETARY TAURINE CONTENT CHANGES LIVER LIPIDS IN CATS" JOURNAL OF NUTRITION, WISTAR INSTITUTE OF ANATOMY AND BIOLOGY, PHILADELPHIA, PA.,, US, vol. 121, no. 10, 1991, pages 1522-1528, XP008019214 ISSN: 0022-3166 See whole document	5,6,21, 34
Y	ZIEMLANSKI, S., CIESLAKOWA, D., AND RAKOWSKA, M.: "Balanced intrainintestinal nutrition. A preparation for intrainintestinal no-residue nutrition" ACTA PHYSIOLOGICA POLONICA., vol. 29, no. 6, 1978, pages 561-573, XP008019215 WARSZAW., PL ISSN: 0374-5627 See whole document	8-13,31, 32,34

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-34 (partially)

A process for improving or maintaining the absorption of Vitamin E by pet animals by administering an edible composition containing pancreatic function promoter.

2. Claims: 1-34 (partially)

A process for improving or maintaining the absorption of Vitamin E by pet animals by administering to the pet animal an edible composition containing liver function promoters.

3. Claims: 1-34 (partially)

A process for improving or maintaining the absorption of Vitamin E by pet animals by administering to the pet animal an edible composition containing intestinal mucosa function promoters.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 03/03523

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/03523

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0162280	A	30-08-2001	US 2001046493 A1	29-11-2001
			AU 4907201 A	03-09-2001
			EP 1261368 A2	04-12-2002
			JP 2003524421 T	19-08-2003
			WO 0162280 A2	30-08-2001
			US 2003017144 A1	23-01-2003
